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NEW GENERA AND SPECIES OF THYSANOPTERA FROM SOUTH AFRICA.

By JACOBUS C. FAURE, Pretoria, Union of South Africa.

This paper consists of the descriptions of seven new genera and fourteen new species. The types are on deposit in the entomological collection of the University of Pretoria, Union of South Africa.

It has been my privilege to spend several weeks in the laboratory of Dr. J. Douglas Hood at Rochester, New York, and to see his excellent collection of Thysanoptera; I am greatly indebted to him for many helpful suggestions in connection with the preparation of this paper.

I also express my thanks to Dr. H. Priesner, of Cairo, Egypt, who very kindly gave me his views on the relationships of several of the forms described herein.

***Heliothrips sylvanus* spec. nov. (Pl. I, Figs. 1, 2.)**

Female (macropterous). Length about 1.3 mm. Color blackish brown to black, antennae largely yellow. Head dark brown, yellowish brown between eyes, eyes black, surrounded by yellowish margins. Antenna: I and II brown, III yellow with basal fourth light brown, IV and V yellow, VI yellow in basal half and shaded light brown distally, VII light brown, VIII gray. Mouth cone dark brown. Prothorax like head, blackish brown over coxae; pterothorax blackish brown on sides and on mesonotum, rest yellowish brown. All legs rather uniformly blackish brown. Abdomen dark brown, with blackish brown transverse lines between segments (due to overlapping). Wings greyish yellow, extreme base of fore-wing, and basal half of scale brown.

All parts of body and legs heavily reticulated. Head about as long as wide, and about 1.7 as long as prothorax. Cheeks distinctly concave, head distinctly constricted at extreme base. Eyes large, scarcely bulging, almost half as

long as head, their width about 54μ and their interval about 94μ . Ocelli on a moderately raised hump, posterior pair situated on a line passing just in front of centre of eyes. Sides of vertex not deeply excavated between eyes and ocelli as in *haemorrhoidalis*.

Antennae very similar to those of *haemorrhoidalis*: segment III about 10μ shorter, V not so broadly truncate at apex, VI distinctly narrowed at base, VIII about 10μ shorter. Sense cones as in genotype: III and IV with one each on outer side; V, one short cone on outer side; VI with a very long cone on inner side and a short one on outer side; VII with one of moderate size on outer side. Mouth cone broad and heavy, as in the genotype.

Prothorax slightly more than twice as wide as long, strongly reticulated, sides feebly concave, without spines. Pterothorax about 1.1 as wide as long, sides concave about middle, rounded in front and behind. Wings about eleven times as long as width at middle, costa bearing a few minute setae but no fringe or large setae; anterior and posterior vein each with about 6 minute setae, posterior fringe well developed, but hairs much shorter at apex of wing; hind wing with fringe on posterior margin and a row of setae about 40μ in length on anterior margin. Legs similar to those of genotype, hind tibiae and tarsi together about 40μ shorter. Interval between hind coxae about 88μ , middle coxae about twice as far apart.

Abdomen very similar to that of genotype, except that spines on segment IX are about 20μ longer (*i.e.* they measure about 80μ).

Measurements of holotype (female) in mm.:—Length 1.36 mm.; head length 0.216, width across eyes 0.2, at base 0.208; prothorax length 0.128, width 0.264; pterothorax length 0.296, width 0.344; fore-wing length 0.72, width at base just beyond scale 0.112, at middle 0.064; abdomen length 0.792, width 0.392.

Antenna, length, 0.352.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	20	44	72	56	52	48	12	48
width in μ	32	40	28	24	24	20	8	6

Male (macropterous). Length about 1.1 mm. Smaller than female, but very similar in coloration and structure. Segment VIII of abdomen with 4 setae about 24μ in length on dorsum near caudal margin, and an incomplete comb of about 10 minute spine-like setae on caudal margin. Segment IX with a pair of setae similar to those on VIII situated distad of the middle line of the tergite, and about one-fourth of the width from each lateral margin; a pair of much weaker

setae laterocephalad of these; near the caudal margin four short strong spines close together, the inner pair about $20\ \mu$ long and about $20\ \mu$ apart, the outer pair about as long as the inner pair but distinctly weaker; a pair of short setae latero-caudad of the short spines; on a line with the short spines on lateral margins a pair of spines about $40\ \mu$ in length, on the ventro-caudal angles a pair of curved spines about $48\ \mu$ in length.

Sternites III to VII of abdomen each with a conspicuous sense-area, transverse, kidney shaped, anterior margin concave, posterior convex, largest area on III, the areas on succeeding segments progressively smaller: the area on III about $96\ \mu$ wide and $16\ \mu$ long, that on VII about 64 by $20\ \mu$; the surface of the sense-areas brown, densely pitted with a large number of minute pale dots.

Measurements of allotype (male cleared in NaOH) in mm.:—Length 1.3 mm. Head length 0.184, width 0.176; prothorax length 0.112, width 0.216; pterothorax length 0.28, width 0.28; abdomen length 0.8, width 0.288.

Antenna, length, 0.32 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	20	44	64	48	48	44	12	44
width in μ	28	32	20	20	20	20	8	6

Described from 8 mounted specimens taken by the writer in the Woodbush, Pietersburg district, Transvaal in April 1924 on *Maesa rufescens* A.DC (4 ♀♀ 2 ♂♂) and in sweepings (2 ♀♀).

This interesting form differs strikingly from the genotype *H. haemorrhoidalis* (Bouché) in the dark coloration of the legs, the absence of a fringe on the costal margin of the fore-wings, the longer head, and in the following antennal characters: the different shape of segment VI and the length of segment VIII.

Poethrips gen. nov.

Body moderately long and slender, surface with anastomosing lines of sculpture and minute granulations. Head flattened, longer than wide, and slightly longer than the prothorax; eyes elongate in dorsal aspect. Antennae seven segmented, third and fourth segments with the usual forked sense cones. Mouth cone broad and heavy, extending across prosternum; maxillary palpi two segmented. Pronotum subrectangular, wider than long, with two strong bristles at each hind angle. Wings moderately narrow, curved outwards. Legs short and rather stout. Abdomen elongate, sharply conical at apex; ninth segment nearly twice as long as the tenth; tergites bearing a fringe-like series of chitinous

plates on the posterior margin (visible only in distended specimens).

Genotype: *Poethrips furcatus* spec. nov.

The species for which this genus is erected resembles those of the genus *Baliothrips* Haliday in the possession of seven segmented antennae, two segmented maxillary palpi, and two bristles at the hind angles of the prothorax. It differs from *Baliothrips* in the following characters:—fringe of plates on the posterior margin of the abdominal tergites, relatively longer ninth segment of the abdomen, flattened head, elongated eyes, and pedicellate sixth antennal segment. The new genus is related to *Bregmatothrips* Hood but differs from it in the seven segmented antennae and the forked sense cones.

***Poethrips furcatus* spec. nov.** (Pl. I, Figs. 3, 4, 5.)

Female (macropterous). Length about 1.4 mm. Color dark brown and yellow: head dark brown, occiput unevenly yellowish brown for about one-fifth length of head from base; eyes black; antennae: I, VI, and VII brown, II brown but yellowish on dorsum at apex and on outer side, III, IV and V greyish yellow; mouth cone brown. Prothorax light brown; pterothorax brown in sclerotic parts, wing-insertions yellow; wings clear, yellowish, without dark bands; legs: all coxae and femora, and middle and hind tibiae brown, fore tibiae yellow at apex, increasingly browner towards base, all tarsi yellow. Abdomen brown, shaded blackish brown at sides towards apex, segment X blackish brown.

Head longer than wide, its width about 0.9 of its length, its length about 1.2 that of prothorax; cheeks parallel; occiput with about ten anastomosing lines of sculpture between base and postocular setae; vertex not sculptured; head somewhat flattened, slightly raised in front of ocelli and feebly produced in front of eyes; head setae as illustrated. Eyes large, bulging slightly, about half as long as head, their width about 40μ and their interval about 72μ . Ocelli about 8μ in diameter, their position as illustrated.

Antennae about 1.7 as long as head, moderately slender; segment V narrowed at apex, VI constricted at base, VII half as long as VI; sense cones: III with one forked cone on dorsum, the branches slender, IV with a similar cone on ventral aspect, V with two very inconspicuous cones, a rudimentary one on outer side and a slender one on inner side, VI with a long cone on inner side, a short stouter one opposite it on outer side, and a third on ventral aspect near apex.

Mouth cone broad and moderately long, reaching across prosternum; maxillary palpi about 40μ long, the distal segment about 28μ , as illustrated; labial palpi about 12μ long and much more slender than the maxillary pair.

Prothorax a little more than 1.3 times as wide as long, pronotum feebly transversely striate, with scattered setae, and two moderately strong bristles at posterior angles, the inner pair about 40μ and the outer about 30μ in length.

Pterothorax slightly longer than wide, mesothorax distinctly wider than metathorax; wings curved outwards; fore-wings about fifteen times as long as their width near the middle, costa with about 20 bristles and a moderately long fringe; anterior vein with four bristles at base, three at origin of posterior vein, and two near apex; posterior vein with about 8-10 more or less equidistant bristles covering the greater part of its length. Legs moderately short and stout; fore femur length about 136μ , width 56μ ; tibia length 112, width 40μ ; hind leg: femur 152 by 40μ , tibia 144 by 40μ ; hind tibia with a row of five short, stout spines on inner side, and three at apex of which the longest is about 30μ in length; legs with numerous setae (omitted in the figure).

Abdomen slender, rather sharply conical at apex; bristles on IX and X subequal, about 120μ in length; tergites laterally with striae like those on prothorax; segment IX about 1.8 as long as the tenth.

Measurements of holotype (female) in mm.:—Length 1.4; head length 0.173, width 0.153; prothorax length 0.14, width 0.19, posterior-angular spines 0.041 and 0.029; pterothorax length 0.27, width 0.26; fore-wing length 0.78, width at base just beyond scale 0.07, at middle 0.05; abdomen length 0.9, width 0.28.

Antenna, length, 0.3 mm.

segments	I	II	III	IV	V	VI	VII
length in μ	29	37	47	45	41	58	29
width in μ	29	29	21	21	21	21	8

Described from six mounted females taken by the writer in grass sweepings at Conjeni on the White M'folosi river, Zululand, 12.ix.1922.

Perissothrips halli spec. nov. (Pl. I, Figs. 6, 7, 8.)

Female (macropterous). Length about 1.0 mm. Color uniformly pale lemon yellow, only extreme tip of segment X of abdomen shaded brown, segments IV to VI of antennae shaded gray in distal half, with VI distinctly darker than the others, segments VII and VIII gray; pigmentation of eyes very dark red, almost black.

Head very small, about twice as wide as long, and only about 0.3 as long as the prothorax; eyes large, occupying nearly 0.8 of the length of the head, their width 40μ , their interval about 28μ . Posterior ocelli contiguous to eyes; antecellar and inter-ocellar setae minute, pale. Antennae very similar to those of the genotype, except that segment VII bears a long slender sense cone on the outer side; cones on III and IV forked, respectively dorsal and ventral, one on outer side of V very small, VI with one very long cone on inner side and an inconspicuous small one on outer side.

Mouth cone long and slender, attaining anterior margin of mesosternum; maxillary palpi three segmented, basal and distal segments about 24μ in length, second 16μ , a slender seta at apex of third segment about 16μ long; labial palpi about 20μ in length.

Prothorax as long as its width at base, and about 3.5 times as long as the head; a group of three short stout spines (about 20μ long) at each posterior angle, with a more slender and slightly longer bristle beneath them; eight weaker setae on hind margin, and a number of pale setae (not illustrated) scattered over surface of pronotum.

Pterothorax about 1.3 as wide as prothorax, its sides nearly parallel; wings long and slender; anterior vein with 4 bristles near base, then a group of three, and three widely separated bristles beyond middle of wing; posterior vein with 4 widely separated, more or less equidistant bristles. Fore femora enlarged, about 0.6 as wide as long, tibia angular at apex on inner side, with a seta at tip of angle, and a small tooth about 4μ in length below it. Hind femora stout, about 120 by 50μ , tibiae about 120 by 32μ , tarsi 56μ in length; longest spine at apex of hind tibiae on inner side about 16μ .

Abdomen somewhat broader than thorax, sharply pointed at apex; segment IX about 80μ long, its caudal bristles about 64μ , and a pair of lateral ones in front of these about 28μ ; segment X about 68μ long, its bristles about 80μ long and weaker than those on IX; tergites I to IX with transverse anastomosing lines of sculpture.

Measurements of holotype (macropterous female) in mm.: —Length 0.98 (very slightly distended); head length 0.05, width 0.103; prothorax length 0.173, width 0.173; pterothorax length 0.22, width 0.22; fore-wing length 0.58, width at base just beyond scale 0.062, at middle 0.037; abdomen length 0.6, width 0.26. Fore-leg: femur length 0.116, width 0.07; tibia length 0.091, width 0.033; tarsus length 0.058, width 0.021. Antenna length 0.22 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	21	31	33	33	33	39	8	12
width in μ	21	21	17	17	17	12	6	4

Male (macropterous). Length about 0.7 mm. Smaller than female and somewhat darker yellow. Fore femora somewhat more strongly enlarged, fore tibiae each with two recurved teeth about 8μ in length at apex on inner side. Tergites II to VIII of abdomen produced, overlapping the succeeding segments, their caudal margins bearing a row of minute sharply pointed teeth; on II and III the teeth are very small, on IV-VI somewhat more conspicuous, on VII and VIII much larger, reaching a length of about 6μ . (These teeth can be seen to best advantage in specimens cleared in NaOH). In addition, tergites IV to VI have at each hind angle a group of three or four finger-like spines, the longest about 10μ , the outer one or two of each group strongly bent outwards; the figure reproduced is a drawing of what I regard as a more or less typical group of spines, but the groups are variable in number and shape of spines even on the same segment. Transverse striae present on tergites, best developed on segment I, on IX semi-circular and interrupted at short intervals. Setae at apex of abdomen very slender, about 80μ in length.

Measurements of allotype (macropterous male) in mm.:—Length 0.72 mm.; head length 0.058, width 0.103; prothorax length 0.165, width 0.161; pterothorax width 0.202; fore-wing length 0.54, width at base just beyond scale 0.054, at middle 0.033; abdomen length 0.38, width 0.21. Fore-leg: femur length 0.103, width 0.07; tibia length 0.091, width 0.037; tarsus length 0.045, width 0.021.

Antenna length 0.198 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	17	25	33	29	29	35	8	10
width in μ	21	17	14	17	14	12	4	4

Described from 11 mounted specimens, all macropterous, 6 ♀♀ and 5 ♂♂, taken by Dr. W. J. Hall at Mazoe, Southern Rhodesia, on *Acacia* (probably an indigenous species) on 31.x.1928.

This species is readily distinguished from the genotype *P. parviceps* Hood by the following characters: (1) relatively longer prothorax, (2) small tooth on fore tibia of female, (2) two larger teeth on fore tibia of male, (4) stronger development of armature on abdominal tergites in the male. I take pleasure in naming this very distinct new species after its collector.

Rhinothrips gen. nov.

Head small, about 0.7 as long as wide, and a little more than half as long as prothorax; antennae broad and heavy,

about three times as long as the head, eight segmented, segments III and IV with forked sense cones. Mouth cone long and heavy, almost twice as long as dorsal length of head, attaining mesosternum; maxillary palpi slightly less than half as long as mouth cone, three segmented, second segment longest; labial palpi two segmented, about one-fourth as long as maxillary palpi, the distal segment five times as long as the basal one. Prothorax about 1.5 as wide as long, broadly rounded behind; three small, inconspicuous spines at each hind angle. Legs short and stout, unarmed except for a pair of stout sharp setae at apex of hind tibiae on inner side. Posterior margin of first abdominal tergite in both sexes with a row of minute irregular tooth-like serrations. Sense-areas on sternites III to VII of abdomen in male minute, sub-circular.

Genotype *Rhinothrips rostratus* spec. nov.

This genus is closely related to *Perissothrips* Hood but differs from it (1) in the relatively shorter prothorax, (2) in the unarmed fore tibiae of the male, and (3) in the absence of teeth on the caudal margins of tergites IV to VIII of the abdomen in the male. From *Rhamphothrips* Karny it differs in the number of the antennal segments, and from *Chilothrips* Hood it can be distinguished by the shape and relative width of the prothorax, which is only slightly widened behind in *Chilothrips*.

Rhinothrips rostratus spec. nov. (Pl. I, Fig. 9.)

Male (dēalated). Length about 0.8 mm. Color brown and yellow. Head light yellowish brown, eyes black, ocelli with bright red hypodermal pigmentation; antenna: I and II greyish yellow, I slightly darker, III and IV yellow, uniformly tinged with light brown, V to VIII light brown; mouth cone colored like the head. Prothorax yellow, shaded faintly with brown. Pterothorax light brown, darker than head. All legs yellow, faintly brownish at tips of tarsi. Abdomen: segments I and II brown like pterothorax, III to VIII yellow, paler than prothorax; IX and X yellow with light brown shading.

Head small, about 0.7 as long as wide, slightly widened behind; occiput with about five transverse lines; vertex not depressed; eyes large, about 0.7 as long as the head, very slightly protruding, closely faceted; ocelli close together on a slightly raised hump, the posterior pair contiguous to eyes; inter-ocellar and other setae minute. Antennae inserted below the vertex, about 2.9 times as long as the head; segments II to V short, broad, subequal in length, II widest in whole

antenna; III to VI strongly pedicillate; areola on II on distal margin; sense cone on dorsal side of III forked, the branches extending broadly laterad; the forked cone on ventral side of IV with longer branches extending cephalo-laterad; V with one short cone on outer side; VI with a long cone inserted near the middle on the inner side and reaching to the middle of VII, a small cone near the middle on the outer side, and a moderately long cone on the ventral aspect near the cephalo-lateral angle. Mouth cone as described in diagnosis of genus.

Prothorax not sculptured, about 1.5 as wide as long; scattered small setae on surface of pronotum, three short spines at each posterior angle, and two on each anterior angle, none of these more than 8μ in length. Mesoscutum transversely striate, metascutum longitudinally striate at sides, transversely striate in front; sides of pterothorax obliquely striate.

Legs stout, fore femur about 80μ long by 40μ wide, tibia 64 by 28μ , much narrower at base; hind femur and tibia respectively about 92 by 36μ and 80 by 28μ ; fore femur with two spines on anterior surface that are stronger than the prothoracic spines, hind tibiae with a pair of similar spines on inner side at apex.

Abdomen moderately slender, feebly sculptured with about three transverse irregular lines across tergites I to IX, and several oblique lines at the extreme lateral margins of each tergite; dorsal surface of tergites minutely pitted, this especially noticeable on first and second (*i.e.*, brown) tergites. Tergites II to VIII each with six equidistant weak setae in a transverse row somewhat behind the middle, and a slightly stronger one near the outermost seta close to the posterior angle. Ventro-lateral spines on segment IX about 32μ long; a pair of very short, moderately stout spines near these on the dorsal side; the spines at the tip of the abdomen curved and about 48μ long. Sense-areas on sternites III to VII very small, oval to subcircular in outline, not more than about 10μ in diameter, situated near anterior margin.

Measurements of holotype (dēalated male) in mm.:—Length 0.88 (slightly distended); head length 0.058, width 0.083; prothorax length 0.103, width 0.153; pterothorax length 0.18, width 0.18; abdomen length 0.56, width 0.19.

Antenna length 0.173 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	17	25	23	25	23	33	8	14
width in μ	17	21	17	19	17	17	6	4

Female (dēalated). Length about 1 mm. Almost identical with male in coloration and structure, except that segment IX of abdomen is not noticeably shaded brown, and segment I of the antennae and the whole of the middle legs

are slightly darker, more distinctly shaded with brown. Ovipositor strong, reaching to apex of segment X. Spines on segment IX and X of abdomen subequal; two dorsal pairs and a lateral pair on IX about $80\ \mu$ in length, the ventral pair much weaker, about $32\ \mu$.

Measurements of allotype (déalated female) in mm.:—Length 0.98 (slightly distended); head length 0.058, width 0.095; prothorax length 0.12, width 0.169; pterothorax length 0.18, width 0.19; abdomen length 0.64, width 0.24.

Antenna length 0.173 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	17	21	25	25	25	37	8	14
width in μ	21	23	19	21	19	17	6	4

Described from 10 mounted specimens, 4 ♀♀ and 6 ♂♂, all idéalated, taken by the writer on *Tephrosia* sp. in the Wood-bush, Pietersburg district, Transvaal, 15.iv.1924.

Dentothrips gen. nov.

Body not depressed, feebly sculptured. Head about as long as wide, produced in front of eyes, eyes large, inter-ocellar bristles about as long as those at posterior angles of prothorax. Antennae eight segmented, segments III and IV with forked sense cones, segment II with a tooth-like projection near apex on inner side. Mouth cone long, heavy, reaching across prosternum, bluntly pointed; maxillary palpi two segmented. Prothorax about 0.8 as long as wide, with two moderately long bristles at each hind angle. Wings long and slender, rather sharply pointed. Legs normal. Abdomen rather broad, sharply conical at apex.

Genotype *Dentothrips graminis* spec. nov.

The projection on the inner side of the second segment of the antennae distinguishes this genus from all known genera; *Projectothrips* Moulton has processes on the dorsal aspect of this segment, but it differs from the new genus in the three segmented maxillary palpi and the very long eighth antennal segment. The projection of the head in front of the eyes, the shape of the wings, the two-segmented maxillary palpi and the forked sense cones suggest *Trichromothrips* Priesner, but this differs in having the mouth cone short and the second antennal segment unarmed. In general appearance the new genus resembles *Bregmatothrips* Hood, but this has three segmented maxillary palpi, unarmed second antennal segments, and simple antennal sense cones.

Dentothrips graminis spec. nov. (Pl. II, Figs. 10, 11, 12.)

Female (macropterous). Length about 1.0 mm. Color yellowish brown: head brownish yellow, shaded to light brown on cheeks; eyes black; ocellar pigment bright red; antennae: I and II yellowish gray-brown, III to VIII pale gray with a faint suggestion of yellow. Mouth cone brown. Thorax similar to head, more brownish, shaded brown on all margins. Fore wings with a median and a distal area shaded gray-brown: basal fifth clear, the median and distal shaded areas each equal to one-third of wing length, and a faintly shaded zone between them about two-thirds as long as basal clear zone; hind wings very pale, greyish, with conspicuous median longitudinal dark line. Legs: all tarsi yellow; tibiae brownish yellow, paler at apices, middle and hind pair shaded brown basally and on outer sides; femora yellow-brown. Abdomen: yellowish brown, tenth segment blackish brown, also the sides of VIII and IX; segments II to VIII demarcated by transverse brown lines, extending completely across abdomen, due to overlapping of caudal margins over anterior margins of succeeding segments, the lines between IV to VIII heavier, about 16μ cephalo-caudad, those between II to IV about 8μ .

Head length equal to its width at base, and about 8μ less than width across eyes; produced part in front of eyes about 20μ long to tip of frontal costa; vertex moderately flattened; cheeks straight; eyes large, length about 64, width 40, interval 48μ ; ocelli situated as on figure; interocellar bristles about 45μ long, other head setae much shorter, arranged as illustrated.

Antennae very similar to those of *Taeniothrips* except for shape of segment II; the tooth-like projection on II about 4μ long, somewhat variable in shape and direction of the tip, as illustrated; forked sense cones of III and IV respectively dorsal and ventral, or normal shape, IV with an additional simple cone on outer side near apex; V with a small cone on inner and a larger one on outer side; VI with three cones: inner one long, outer short, ventro-apical one intermediate in length.

Mouth cone bluntly pointed, extending across prosternum; maxillary palpi: basal segment about 8, distal 28μ long; labial palpi about 20μ , much more slender.

Prothorax wider than long, widened posteriorly, surface not sculptured, setae as illustrated, two pairs at hind angles about 45μ in length. Mesothorax wider than metathorax, sides rounded, mesoscutum feebly transversely striate; sides of metathorax parallel, metascutum with more distinct, anastomosing striae and 4 setae on anterior margin subequal

to anterior marginals of prothorax. Fore wings narrow, about 20 times as long as their width at middle; costal bristles long, subequal to fringe hairs near anterior apical margin; fore-vein with bristles as follows: 3 at base, 3 at origin of posterior vein, 2 at apex; hind vein with 7 to 8 more or less regularly spaced bristles.

Fore femora slightly enlarged, about $100\ \mu$ by $44\ \mu$ wide, tibiae about 100 by $36\ \mu$; hind femora 120 by 40 , tibiae 144 by $32\ \mu$; fore tibiae with a minute pointed spur on inner side at apex.

Segment IX of abdomen $80\ \mu$ long, its bristles about $120\ \mu$; segment X divided above throughout its length, its length about $68\ \mu$, its bristles $90\ \mu$.

Measurements of holotype (female) in mm.:—Length 1.0; head length 0.112, width across eyes 0.12, at base 0.112; prothorax length 0.14, width 0.17, postero-angular spines 0.045; pterothorax length 0.194, mesothorax width 0.2, metathorax width 0.18; fore-wing length 0.6, width at base just beyond scale 0.058, at middle, 0.037; abdomen length 0.62, width 0.25.

Antenna length 0.24 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	21	25	37	33	33	41	10	12
width in μ	29	27	17	17	17	19	8	4

Described from 4 macropterous, mounted females, taken by the writer on grass at Pretoria, 2.xii.1923. This species is readily distinguished from all known forms by the peculiar shape of the second antennal segment.

Caprithrips gen. nov.

Body moderately elongate and depressed. Head about 0.8 as long as wide, widest across eyes, produced in front of eyes, produced part about one-sixth of total length of head; eyes large, strongly protruding. Mouth cone heavy, broadly rounded, reaching half way across prosternum, maxillary palpi three segmented. Antennae twice as long as head, segments III to V short, almost as wide as long; sense cones on III and IV simple, not forked.

Prothorax about 1.3 as wide as long, about 1.6 as wide behind as in front, and about 1.4 as long as the head; pronotum without any long spines. Legs short and stout. Abdomen elongate, broadly conical at tip, not sharply narrowed at base of segment IX or X but evenly narrowed from base of VII to apex of X; tergite IX with two stout bristles on dorsum, about half as long and twice as thick as longest bristles on same tergite.

Genotype *Caprithrips analis* spec. nov.

This genus resembles *Anaphothrips* Uzel and *Agerothrips* Trybom but differs from them in the simple sense cones of the antennae. From *Bregmatothrips* Hood it differs in lacking well developed pronotal spines. The broadly conical tip of the abdomen and the enlarged bristles on tergite IX are distinctive characters.

Caprithrips analis spec. nov. (Pl. II, Figs. 13, 14.)

Female (apterous). Length about 1 mm. Color pale yellow, eyes so dark red as to appear black; antennae: segments VI to VIII light brown, V greyish yellow, I to IV yellow; distal half of segment X of abdomen shaded light brown; mouth cone brown at tip.

Length of head equal to its width behind eyes, width across eyes about 0.012 mm. wider; cheeks parallel; vertex produced in front of eyes into a rounded hump that covers about half of the first antennal segments. Eyes large, closely faceted, about 0.6 as long as the head, their width about 32μ and their interval 44μ . Ocelli absent. Head setae as illustrated. Occiput with about 10 transverse striae. Antennae as illustrated; segments III and IV each with one simple sense cone on outer side, the cone on III dorsal, the one on IV ventral in position; V with a very slender cone on outer side; VI with a long cone on inner side and two shorter cones on outer side. Maxillary palpi about 28μ long, first and third segments subequal in length, second shorter, first about twice as broad as third. Labial palpi slightly longer than third segment of maxillary palpi.

Prothorax wider than long, more than one and a half times as wide behind as in front; surface of pronotum with numerous fine transverse striae and scattered setae; setae on hind margin and angles very weak, not more than 12μ in length. Meso- and metanotum rectangular, minutely striate like the pronotum, devoid of large bristles. Legs short and stout, fore femora slightly more enlarged than others, hind tibiae strongly expanded especially in distal third, other tibiae also broad.

Abdomen rather elongate, segments III to VII subequal in width and length, their length about one-third of their width. Tip of abdomen stout, broadly conical. Tergites faintly and minutely transversely striate; tergites I to VIII each with a transverse row of eight weak setae on hind margin, subequal in length on all segments; tergite IX bears near the caudal margin three pairs of long slender bristles about 100μ in length, and a dorsal pair (about 48μ apart)

of distinctly stronger bristles about twice as thick and half as long as the three pairs near the caudal margin. Tergite X bears two pairs of dorsal bristles about 80μ in length.

Abdominal sternites II to V each with about 12–15 minute teeth on hind margin at sides; on sternites II to VII there are two transverse rows of about eight setae increasing in length caudad.

Measurements of holotype (female) in mm.:—Length 0.97 (slightly distended); head length 0.088, width across eyes 0.1, behind eyes 0.088; prothorax length 0.124, width at base 0.16, at apex 0.1; postero-angular setae on pronotum 0.012; pterothorax length 0.16, width 0.168; abdomen length 0.67, width 0.208. Fore leg: femur length 0.08, width 0.044, tibia length 0.06, width 0.036; hind femur length 0.096, width 0.04, tibia length 0.092, width 0.032.

Antenna of *paratype* female, length 0.176 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	20	24	24	24	24	40	8	12
width in μ	24	24	18	20	16	16	8	4

Described from two apterous females taken by the writer from the base of tufts of tall grass at Pretoria, 4.ii.1931. This interesting new species can readily be distinguished by the generic characters.

***Neothrips obesus* spec. nov.** (Pl. II, Figs. 15, 16.)

Male (brachypterous). Length about 1.1 mm. Color of body and appendages rather uniformly light brown, tinged with yellow; only segment II of antennae, and tarsi, somewhat paler, brownish yellow. All spines pale, inconspicuous.

Head about 1.1 as long as wide, and very slightly shorter than the strongly chitinized part of pronotum. Cheeks parallel. Postoculars stout, expanded apically, about 28μ in length, situated about half their length from posterior margin of eyes. Eyes greatly reduced, consisting of about four facets, scarcely protruding; about six minute setae on dorsal aspect of head, and four in a transverse row between eyes near anterior margin. Ocelli absent. Dorsal surface of head in posterior half with transverse striations that anastomose sufficiently to produce an effect of weak reticulation.

Antennae inserted beneath the vertex, the outer basal angles of their first segments appearing to extend beneath the median margin of the eyes. Antennae about twice as long as the head, rather broad and heavy; segments VII and VIII closely united, but the suture between them distinct; sense cones: III, 0–1; IV, 1–1; V, 1–1; VI, 1–1; VII one on dorsum.

Mouth cone long, slender and sharply pointed, extending well on to mesosternum; maxillary palpi about 28μ in length, the second segment about six times as long as the first; labial palpi about 30μ in length, the two segments subequal. Labrum sharply pointed.

Prothorax large, and elongate in appearance, anterior stippled membrane strongly developed, about 0.05 mm. in length, and bearing the two anterior angular spines; width of prothorax (including coxae) about 1.9 times the length of the sclerotic part of the pronotum. All the usual spines present, pale, inconspicuous, expanded at apex, subequal in length to postoculars.

Pterothorax rectangular, slightly narrower than prothorax; rudimentary wings minute. Fore femora enlarged, width equal to half their length; fore tibiae short, fore tarsus with a short tooth (about 8μ in length), blunt on both tarsi of holotype, sharply pointed on one fore tarsus of male paratype. Middle and hind legs short and robust; hind femora nearly half as wide as long, and about 0.9 as long as fore femora.

Abdomen broad and heavy, wider than prothorax across coxae. Dorsal spines on segments II to VI broadly expanded at apex like those on prothorax: posterior angulars subequal to postoculars, marginals slightly longer. Posterior angular spines on segment IX long and pointed, nearly as long as tube, those on VII also pointed but somewhat shorter; marginal pair on VII and two pairs on VIII expanded apically and nearly twice as long as postoculars; IX also bears two pairs of capitate bristles distinctly less widely expanded than postoculars, the inner pair two-thirds as long as tube and much longer than the outer pair. Setae at tip of tube weak, about three-fourths as long as tube. Segments II to IX bear a transverse row of 6 to 10 minute setae on dorsum near the middle of each tergite; on the ventral aspect of segments II to VIII there is a similar row of minute setae across the middle, and two longer, pointed setae on the posterior margin.

Tube short and heavy, about 0.8 as long as head, more than twice as wide at base as at apex, sides slightly concave near the middle.

Measurements of holotype (male) in mm.:—Length 1.16 (distended). Head length 0.124, width 0.112; mouth cone length 0.145; prothorax length 0.128, (anterior membrane 0.054) width 0.248; spines: posterior angulars 0.033, on coxae 0.025; pterothorax length 0.165, width 0.232; abdomen length 0.76, width 0.28; tube length 0.095, tube setae 0.07, tube width at base 0.066, at apex 0.029; spines on ninth abdominal

segment: knobbed 0.058, pointed 0.091, on eighth 0.05. Fore-leg: femur length 0.132, width 0.066, tibia length 0.07, width 0.037; tarsus length 0.041, width 0.029.

Antenna length 0.25 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	25	33	33	33	33	37	37	17
width in μ	29	29	25	27	25	23	19	12

Female (brachypterous). Practically identical with male in coloration, form and details of structure, with the following exceptions: abdomen somewhat broader; teeth on fore tarsi smaller; two pairs of capitate bristles on dorsal aspect of ninth abdominal segment more widely expanded (though not quite as broad as those on eighth), and both pairs about two-thirds as long as tube.

Measurements of allotype (female) in mm.:—Length 1.2 (slightly distended). Head length 0.12, width 0.132; prothorax length 0.132 (anterior membrane 0.045), width 0.24; spines: posterior angulars 0.033, on coxae 0.029; pterothorax length 0.145, width 0.25; abdomen length 0.8, width 0.32, tube length 0.107, tube setae 0.066, tube width at base 0.074, at apex 0.029; spines on ninth abdominal segment 0.066, on eighth 0.05. Fore-leg: femur length 0.116, width 0.058, tibia length 0.07, width 0.037; tarsus length 0.041, width 0.029, tooth 0.008.

Antenna length 0.27 mm.

segments	I	II	III	IV	V	VI	VII	VIII
length in μ	29	37	37	37	33	37	41	21
width in μ	29	33	29	29	27	25	21	14

Described from five mounted specimens: two ♂♂ and three ♀♀ taken by the writer under the bark of a "fever" tree (tall, yellow-barked *Acacia* sp.) on the Ubombo mountain in Zululand, 17-ix-1922.

This species differs from *N. corticis* Hood in the relatively shorter head, the absence of long pointed spines on segments VI and VIII of the abdomen, the pale coloration of segment II of the antennae, and the smaller tarsal teeth of the male.

(Continued in April number)

EXPLANATION OF PLATES

(J. C. F. del)

PLATE I

Heliothrips sylvanus spec. nov.

Fig. 1—♀ paratype, head and prothorax

Fig. 2—♀ holotype, left antenna

Poethrips furcatus gen. et spec. nov.

Fig. 3—♀ holotype, head and prothorax

Fig. 4—♀ paratype, maxillary palpus

Fig. 5—♀ holotype, right antenna

Perissothrips halli spec. nov.

Fig. 6—♂ allotype, head and prothorax

Fig. 7—♂ allotype, right antenna

Fig. 8—♂ paratype, right posterior angle of fourth tergite

Rhinothrips rostratus gen. et spec. nov.

Fig. 9—♂ holotype, head and prothorax

PLATE II

Dentothrips graminis gen. et spec. nov.

Fig. 10—♀ holotype, head and prothorax

Fig. 11—♀ holotype, second segment of left antenna

Fig. 12—♀ holotype, right antenna

Caprithrips analis gen. et spec. nov.

Fig. 13—♀ paratype, left antenna

Fig. 14—♀ holotype, head and prothorax

Neothrips obesus spec. nov.

Fig. 15—♂ holotype, head and prothorax

Fig. 16—♂ holotype, right antenna

Pseudocryptothrips proximus spec. nov.

Fig. 17—♂ holotype, head and prothorax

Fig. 18—♂ holotype, left antenna

PLATE III

Allothrips africanus spec. nov.

Fig. 19—♀ holotype, head and prothorax

Fig. 20—♀ holotype, right antenna

Idiothrips bellus gen. et spec. nov.

Fig. 21—♀ holotype, head and prothorax

Fig. 22—♀ holotype, right antenna

Fulgorothrips priesneri gen. et spec. nov.

Fig. 23—♂ paratype, head and prothorax

Fig. 24—♂ paratype, right antenna

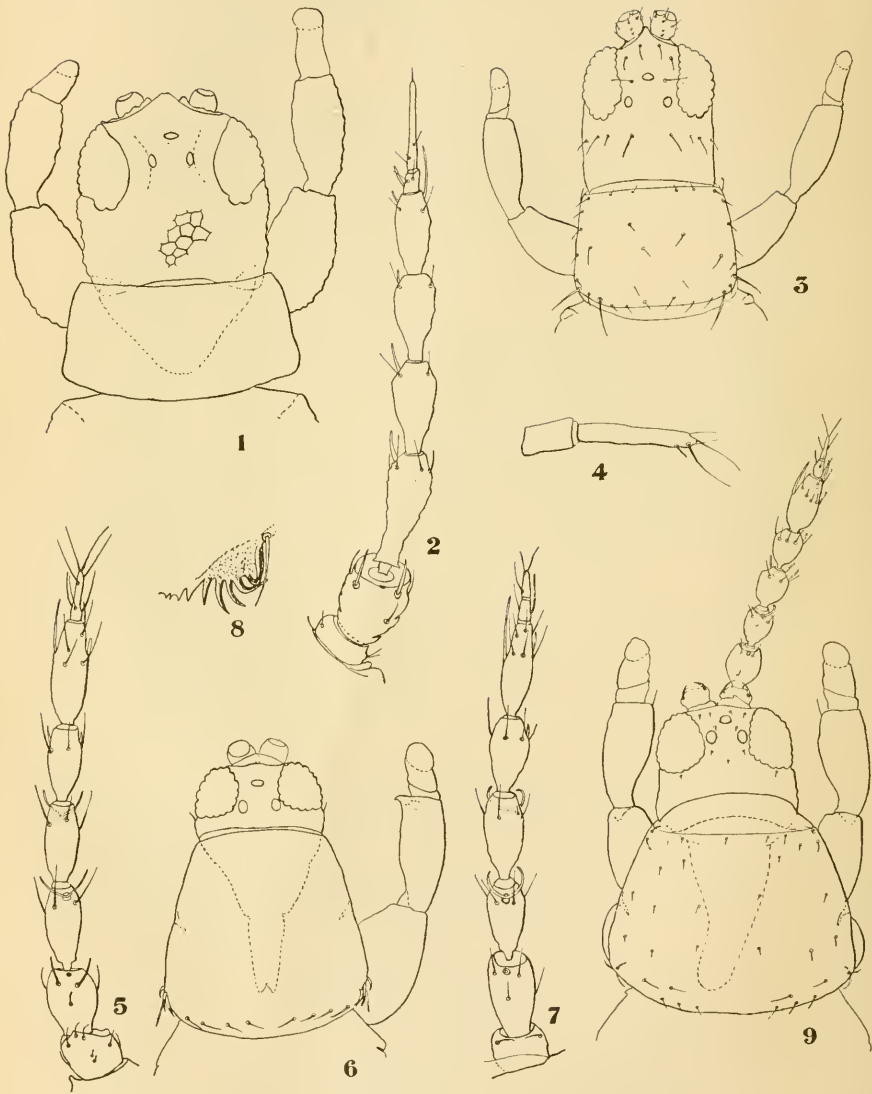
Hoodiana pallida gen. et spec. nov.

Fig. 25—♀ holotype, head and prothorax

Fig. 26—♀ holotype, left antenna

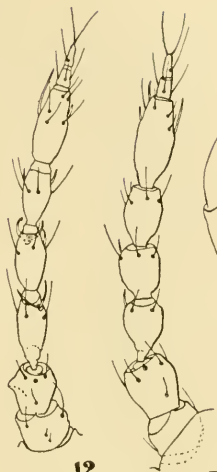
Stephanothrips graminis spec. nov.

Fig. 27—♀ paratype, head and prothorax





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12



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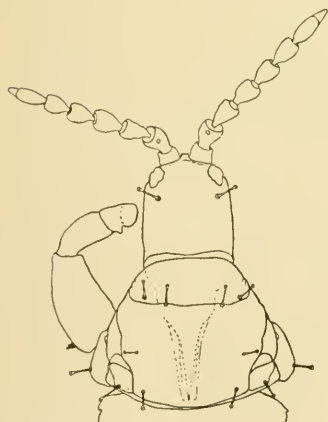
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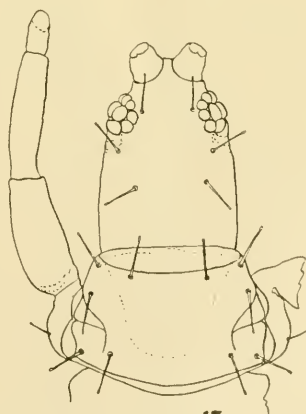
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